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# Designing the Tourist Agency of the Future

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## **Designing the Tourist Agency of the Future**

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### **Abstract**

The Internet has challenged the traditional business model of travel agencies: What is the reason for their existence if information is abundantly available and transactions can be flexibly booked on the Internet? This paper argues that good travel advisory services create a significant added value, if they succeed in uncovering the customers' hidden needs and creating a better user experience. Modern information systems such as the SmartTravel system developed by the authors support this effort and provide the customers with an involving "shopping" experience. SmartTravel supports the agent-customer interaction with a large display and an interface integrating professional and user-generated content. We present the design rationale and the interface design of the SmartTravel system. First evaluation results indicate that the users value the system, because it provides richer and more trustworthy information in a more enjoyable environment.

**Keywords:** tourism, travel advisory, CSCW, large display, advisory support, e-tourism

### **Market Pressures and Opportunities for Travel Agencies**







In the last years tourism has been booming throughout the world. Yet, at the same time tourist agencies struggle in surviving as new competitors have undermined their traditional business model [Buhalis 2002]: an increased number of simple transaction such as booking a flight, car or hotel has moved to the Internet. Transport providers do not protect their traditional distribution channels any more forcing travel agencies to charge their customers for their booking services. Even large travel companies skip travel agencies and offer their packages directly online (such as TUI, one of the leading German travel operators). The information quality of their web information is typically at least as high as that of their catalogues. Public tourist organizations (such as myswitzerland.com) increasingly see it as their task to actively promote their offerings with excellent web-based information.

Information on travel destinations is freely available not only from professional online sources but also as user generated in travel communities in the form of forums and wikis [Prestipino&Schwabe 2007]. The information quality of this user generated content can be as high or even higher than professional content [Prestipino et al. 2006, Aschoff et al. 2007]. Google Maps, Google Earth and photo communities allow users to visually explore potential tourist destinations in great detail. Rating systems (e.g. for the quality of hotels) help to build trust in internet offerings. Even commercial companies outside of the traditional tourism industry are creating travel portals offering information both from commercial sources as well as user-generated content: sites such as holidaycheck.de (operated by a large German publishing

company) offer hotel descriptions and photos from hotel operators and ratings, photos and vacation videos from actual guests who had visited the hotel themselves.

Thus neither traditional tourist destination information nor access to transaction systems is a viable business model for travel agencies any more. Rather, travel agencies have to focus on other competencies and provide new value-added services to attract and keep customers. Their core competencies which distinguishes them from the Internet competition are advisory services<sup>1</sup>. In order to build a business model based on this point of advantage they must build on current weaknesses of the Internet channels: Internet information is fragmented, it takes a significant amount of time to find good information even for experienced travellers and the trustworthiness of many sources can still not be verified. Thus there may be a future role of the travel agent as an information broker, guiding users through offers on the Internet. Yet, this model based on the brokering concept alone is likely to be short-lived, as in such a scenarios travel agencies increasingly find themselves competing against specialized Internet-based eTourism intermediaries [Buhalis&Licata 2002], Internet search engines and information gatekeeper companies such as Google and Co, who are providing ever more sophisticated and effective information search, aggregation and brokerage services.

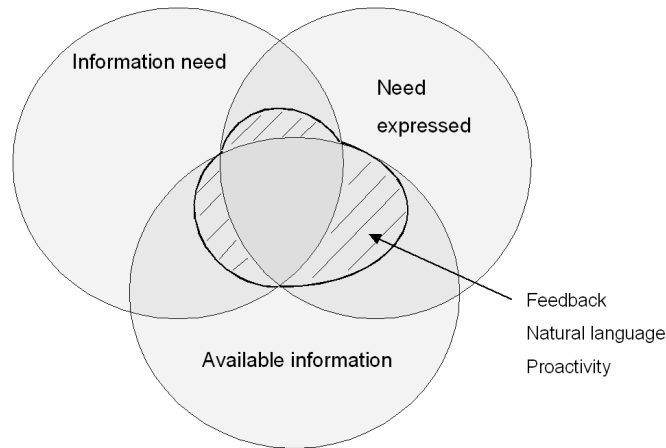
Two other approaches may be promising: Tourists frequently are not able to exactly formulate their demand, but rather express vague needs based on general feelings and desires [Prestipino&Schwabe 2006]. Only once they see the information corresponding to their unexpressed interests, they become aware that it fits their information needs in the first place. An example for such an ill-defined information need is shown in Figure 1. A member of tourism community is asking for information through a very vague question (i.e. looking for a sunny place in Europe). Finding an answer by consulting a classical guidebook or an Internet search engine would be difficult. By asking a travel community in natural language dialog instead he does not only get relevant answers for such a vaguely formulated need, but also additional relevant information, for which he was not yet aware that it made part of his information needs (i.e. chilly water temperatures in the example below).

Branches > Europe - Eastern Europe and the Caucasus		-- Select a Branch: --
<a href="#">Reply to this topic</a>		
<b>JillMuegge</b> Posted: 09 Jan 2006 1:07am	<b>In need of some sun!</b> Hi All, My friends and I are in London and are looking for a European destination to head in March that would be warm, sunny and beachy (and not cost us all of our savings) Any great ideas? Many Thanks, Jill	 
<b>AndrewSmith</b> Posted: 09 Jan 2006 1:34am	<b>1.</b> Not in Central / Eastern europe. Try Turkey, Morocco or the Canary Islands. Loads of cheapo package deals there. ----- Andrew Smith	 
<b>Quartier Rouge</b> Posted: 09 Jan 2006 2:00am	<b>2.</b> Southern Spain and Portugal, Sicily in Italy, Lampedusa Island in Italy, Crete, Cyprus all correspond to your criteria. However the sea may be a bit chilly to swim in March. In late March however you may find nice weather (temps. in the 20s Centigrade)	 

**Figure 1:** An information search in a Lonely Planet Community

Expressing an information need is particularly a difficult issue when users are confronted with an information product, such as a travel catalogue, a travel guide book or the Internet as it is presented by the Google search engine. Users cannot express their information need effectively until they know what the possible answers look like and what terms are relevant in the first place. Belkin [Belkin et al. 1982] calls this problem an „anomalous state of knowledge“.

<sup>1</sup> Another one may be configuring trips on the „long tail“ not served by large travel companies.



**Figure 2:** The relationship between objective information need, expressed need and the available information [Prestipino&Schwabe 2005]

This problem is depicted in

Figure 2 : The objective *information need*, the *need expressed*, and the *available information* only partially overlap. There is some information need not expressed and therefore not satisfied. And even if it expressed, it may not be available. Rather than focussing on making information available (as in the traditional travel agency business model), travel agents should focus on matching the objective information need and the expressed need. Natural language *information services* offered by human consultants may increase the overlapping area in comparison to direct access to an *information product* as humans can be empathetic, proactive and can use the appropriate (im-) precision and richness of natural language to query, give feedback and ask for clarification.

Against this background, we propose that a more long-lived business model should be based on helping travellers to express their information needs, to reduce the expressed information needs to their objective information needs and finally satisfy this need. This is an iterative process, typically in a dialog. Its success depends on the capability of the agent (which we do not discuss in this paper) and on the availability of information in sufficient quantity and quality. Information should not only be correct, up-to-date, trustworthy and complete (to name a core few established information quality criteria [Prestipino 2008]), but it should be rich enough to capture the imagination of the user and thus allow his/her hidden travel information needs to surface - and thus be comprehended both by the agent and the user himself.

In the following sections we present a concrete system we have developed to support the realization of such an approach: SmartTravel. SmartTravel is a prototype system based on using an interactive large-display (a Smartboard<sup>2</sup>) to create an interactive workspace for cooperative travel advisory enabling the proposed business model of the travel agency of the future. Section two briefly introduces our design approach, the requirements gathered for the SmartTravel system and the main functionalities of the prototype. Section 3 covers the evaluation of the system use in a field experiment a real travel agency and section four closes the paper with a discussion of future work.

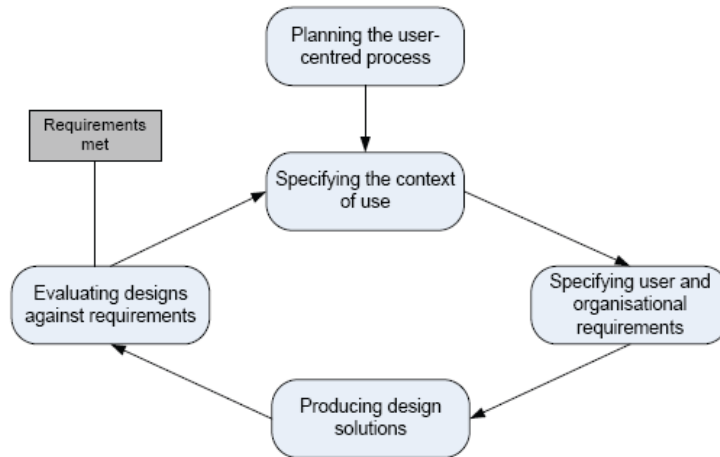
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<sup>2</sup> <http://www.smarttech.com>

## The SmartTravel Prototype

### User Centered Design Approach

We developed the SmartTravel system following a user-centered design approach (Figure 3) [ISO 13407] which is based on iterative process of requirements specification, design and user feedback.



**Figure 3:** The user centered design process according to [ISO 13407]

After an initial planning, the context of use is specified (travel advisory in a travel agency in our case), users and organizational requirements are gathered and based on those requirements and the creative intuition of the designer, a solution is produced. Finally the design is evaluated against the requirements before the cycle starts again. This paper reports on the first iteration in our user-centred process.

User centered design requires user involvement from “day one”. The focus is on identifying the *true* user needs. As these are difficult to formulate, usability tests, field tests and piloting as well as support during organisational implementation are recommended. Only when seeing the (intermediate) results, the users can judge, whether their true needs are satisfied. The user-centered design methodology plays a dual role in our approach and in the contribution of this paper: we apply it for designing the SmartTravel system and expect the travel advisor to apply its principles when designing a personalised travel offer for the customer.

If applied to a socio-technical innovation such an iterative research process can lead to knowledge contribution beyond informing the design: It can allow to identify organizational, technical and legal pre-conditions of a socio-technical innovation and it identifies effects on a individual, group, process, organization and societal level [Witte 1997, Schwabe&Krcmar 2000]. Scientific knowledge contributions can then take the form of theories, frameworks, methodologies, instruments or methods [Hevner et al. 2004]. In this sense, this paper contributes first insights and guideliness for designing user-centred interactive large-display workspaces specifically for cooperative travel advisory and methodological guideliness for providing user-centred travel consultancy.

### Requirements for the SmartTravel Prototype

*We collected empirical data to inform our design. In a web survey with 60 users location of an accommodation was determined as the most important feature, followed by price and hotel comfort (*

Figure 4).

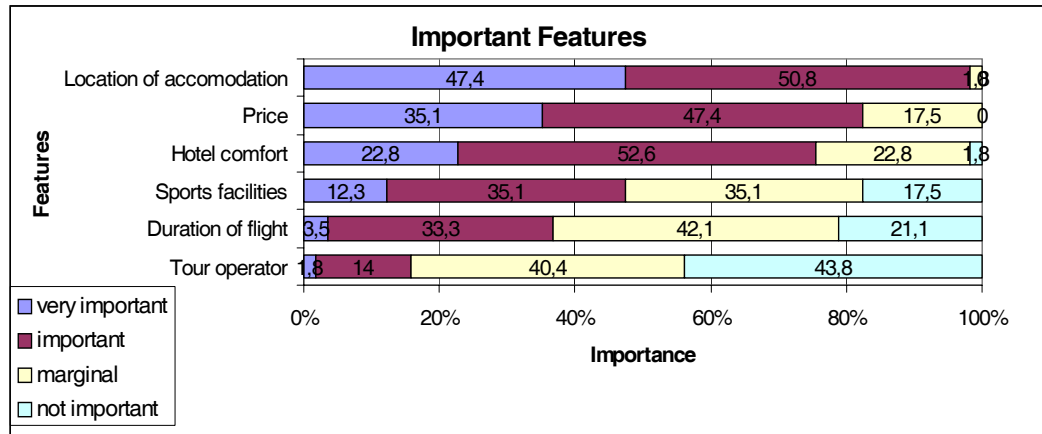


Figure 4: Important travel features

Accordingly, the survey results suggest that travel information should primarily be based on location information (very important = 47,4 %, important 50,8%) and as a second priority on price information (very important = 35,1 %, important 47,4 %). Furthermore, it is interesting that travel agencies cannot rely on the brand of a tour operator (40,4% marginal, 43,8 % unimportant) to promote their destinations. In addition to the survey, a workplace study and interviews in two travel agencies were undertaken. Their results indicate that travel agents primarily rely on catalogue information to convey information on tourist destinations (

**Figure 5)** while computers are largely used only for transaction information (availability, cost).



Figure 5: Workplace of a travel agent

Catalogues are ill-suited for this purpose as they convey only static, context-free extracts of the travel destination. However, as there is more and richer information available on the computer than in the catalogue, an increasing number of travellers are trying to look at the agents screen during a consultation period. Advisors then shift the screen, but the interaction remains inconvenient. There remains an intrinsic information asymmetry to the advantage of the agent in the literal sense of the principal agency theory [Eisenhardt 1989]. This arrangement implies an

inequality of roles, spurs distrust in the proposals of the agent and inhibits interaction - thus making effective collaboration difficult [Rodden et al. 2003, Scaife et al. 2002].

The travel advising process is also highly emotionally coloured – customer criteria can rapidly change based on impressions of presented alternatives: a terrific photograph, a compelling video or a funny anecdote can swiftly shift customer desires and create emotional bonds to destinations or to the agent. The problem-solving process is intertwined with an emotional dimension of the consulting experience : desires are stirred, moods awoken and in this situation a decision process is carried out. We term such a process “emotional collaboration” [Novak et al. 2008].

Advisors voiced several further complaints about their current support:

1. As few customers do not immediately make their decision, the advisory system should automatically store a history of the advisory process to allow the agent to quickly continue the consultation process once the customer returns. A history would even allow the advisor to prepare the system as well as himself for a follow-up session with the customer.
2. Catalogue information rarely has the requested amount of detail. Customers ask for more detail leading to a subsequent extensive information retrieval efforts.
3. Information systems are poorly integrated forcing the advisor to frequently switch systems during the consultation process. Typically, advisors do not only use the official agency systems such as electronic catalogue and booking systems, but also Internet booking portals (such as ebookers.ch) and rating systems like Tripadvisor.

### **Architecture of the SmartTravel Prototype 3**

Our approach addresses the above issues in two ways. First, we propose that a travel advisory support system should provide a shared visualization of the problem space and relevant information resources, providing the customer with a shared view on the same information resources as the travel agent.

This should reduce the principal-agent conflict: There is less information asymmetry, increased process transparency and the customer is empowered to an equal and active partner. This in turn should increase the credibility of the agent and heighten the customer’s trust in the consultancy. Enabling the customer to proactively explore possible options of interest directly on the shared workspace should also help the agent to discover otherwise hidden customer preferences.

Second, the visibility of different alternatives and the possibility to act and explore information about possible destinations on one’s own, should entice customer’s closer emotional involvement. Extensive use of multimedia resources in a visually impacting way should heighten user experience.

One approach to addressing the first issue has been the use of shared multiple small screens with a single mouse as the interaction control device [Rodden et al. 2005]. In our approach, we have opted for a single large shared surface with direct multi-actor access. Large displays lend themselves readily to providing a shared visual workspace that can be inspected jointly by both participants. Moreover, their visual qualities are ideal for using multimedia to amplify the emotional impact.

**We see a close coupling of the problem-solving process with heightened emotional involvement as a promising strategy for improving both customer experience and the cooperation process.**

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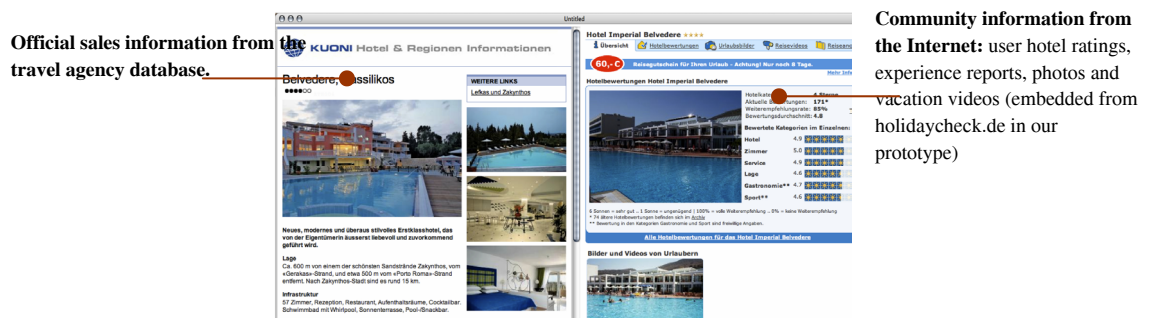
<sup>3</sup> This description is an extended extract from our CHI08 Work-in-Progress Paper [Novak et al. 2008]

**Figure 6** depicts our solution. The workspace consists of two areas: the shared problem definition space (product selection criteria and search queries) and the shared visualization of the solution space (visualization of matching results, history of user choices and favorites). The physical arrangement is such that the customer and the sales agent stand in front of a large board-like display. We opted for a touch-sensitive solution (a Smartboard<sup>4</sup>) as it allows the most natural interaction of pointing, dragging and selecting with bare hands. It also allows natural coordination of access to the shared resource between participants (pointing, gesture). We felt that such a setting introduces more equality between the parties, providing the best visibility and most natural interaction. We also felt it would better stimulate communication and interaction than the “shoulder to shoulder” seating with a single mouse control [Rodden et al. 2003].

In a typical use flow, the travel agent asks questions about customers vacation needs and preferences and enters them directly as selection criteria into the problem definition space. The matching offers are displayed as a result list and geographically visualized (Google Maps). The choice of Google Maps is supported by the high rating of location information voiced during the requirements gathering. The two visualizations are interlinked: selecting an offer in the list shows its location on the map, and vice versa. The customer can now choose to display more details information about offers which spur his interest.



*Figure 6: The SmartTravel prototype*



*Figure 7: Detail information from travel agency sources and from Internet communities*

The detail view presents both information from official travel agency sources (online database) as well as information from Internet travel communities (**Figure 7**). Including user-generated content fulfills three purposes:

1. Users from travel communities may provide information that is not available from other sources at all or not in the same quality: For example, photographs may be more up-to-date or give more detail.

<sup>4</sup> Smart Technologies, <http://smarttech.de>



2. User generated content may be regarded more trustworthy than professional information. The traveller knows that professional content is biased (as reflected in the low brand reputation of tour operators) while contributions of community members are thought to be neutral. Their comments reflect traveller experiences and their pictures may show locations in authentic conditions.

3. Professional catalogue information has to walk on a narrow line praising offerings sufficiently to make them attractive and at the same time avoiding legal liabilities due to possibly false claims. User-generated content does not need to fulfil as strict legal obligations if presented in a balanced manner.

The interesting offers can be added to the favorites while all inspected detail pages are automatically saved in a visual history (Fig. 1). This supports a return to an interesting location during a consultation period and travel agents may use it to prepare follow up meetings (rf. requirements section).

The architecture of the SmartTravel system supporting the realization of the above approach is given in Figure 8. The SmartTravel client application can be run both as a Smartboard application in the travel agency as well as a web-only application at the user's home PC. This opens up the space for additional scenarios such as follow-up consultations or remote advisory services. The modular structure of the system allows easy inclusion of different local and external data sources (travel agency databases, Internet community portals) and services (e.g. Google Maps in the current prototype).

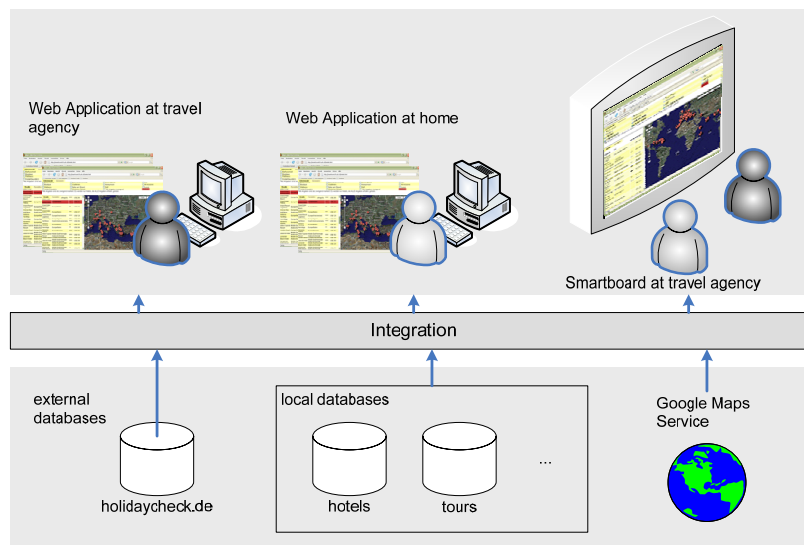


Figure 8. Architecture of the SmartTravel Prototype

## Evaluating SmartTravel<sup>5</sup>

### Set up and data collection of a real-world experiment

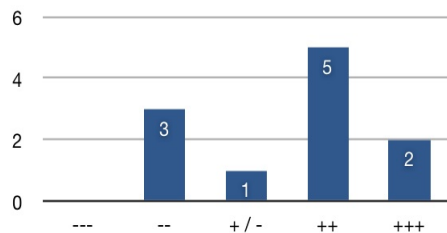
The proof-of-concept prototype depicted in Figure 1 has been evaluated in a controlled experiment in a real-world travel agency. Twelve customers from their client pool and four travel agents have been recruited as test participants on a voluntary basis. The customer sample was spread equally across different age groups (20-60 years) the majority of which declared high proficiency in computer use (67% advanced or professional use).

<sup>5</sup> This is an extended and revised version of a chapter from our CHI08 Work-in-Progress Paper [Novak et al. 2008]

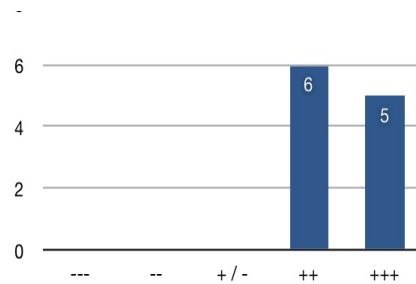
The travel agents received a 30min hands-on training in using the system. The customers received no prior training. They have been presented with the task of finding 3 suitable vacation offers for two different scenarios: planning a beach vacation and planning an adventure vacation. One scenario was accomplished in a classical travel consultancy setting (travel agent with PC, customer with print catalogue) while the other was accomplished by using the Smartboard workspace. The order of exposure to the two different settings and the assignment of the two scenarios were permuted. The time for task completion was limited to 30 minutes (medium duration of a typical consultancy session). User feedback was collected through in-situ observation, a questionnaire and informal discussion.

We could observe a similar “wow effect” as reported in the study by [Rodden et al.2006]. Both travel agents and customers were impressed and delighted by system. In our case, they loved the visual overview and especially the display on the large screen, the natural (touch) interaction, the possibilities of easily showing and discussing different solutions and the quick iteration through and saving of different solutions. The agents particularly pointed out the helpfulness of having an interactive overview of the solution space as a visual reminder for themselves and for enticing proactive user feedback. They highlighted how customers brought up options and preferences which they hadn’t recognized.

### Trustworthiness



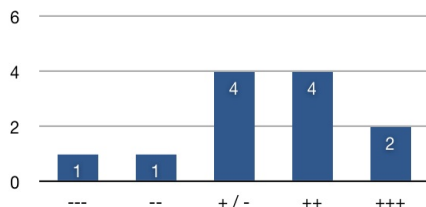
**Figure 9:** Trustworthiness in classic setting



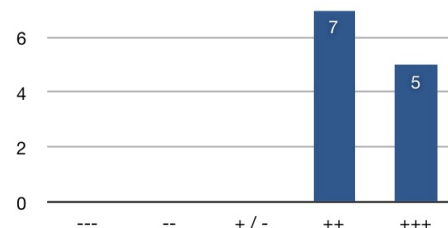
**Figure 10:** Trustworthiness with Smartboard

User feedback also confirms increased credibility of information (Figure 9-10): all customers attribute high (50%) to very high (41,7%, one w/o answer) credibility in the Smartboard setting as opposed to negative (25%) and low positive valuation in the classical setting (only 16,7% high). This is attributed to transparency (“I see what the agent sees”) and inclusion of community information.

### User Experience



**Figure 11:** User experience in classic setting

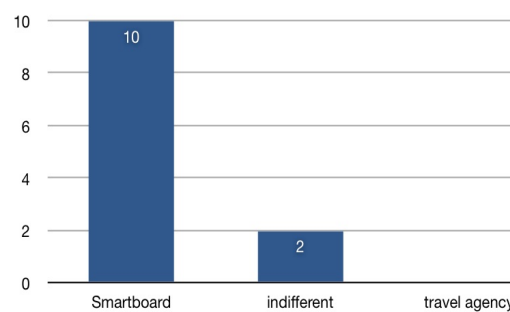


**Figure 12:** User experience with Smartboard

Customer feedback (Figure 11-12) shows an overwhelming preference for the Smartboard-enhanced consultancy (58,3% assessed the experience as good and 41,7 very good) compared to the classical setting (33,3% good, 16,7% very good, 12,7% negative). Especially the overview of the solution space was found superior to the classical setting (66,7% very good and 33,3% good vs. 33,3% good and 66,7 neutral or negative).

### Consultation – Overall

In a direct comparison (Figure 13), 83,3% customers preferred the Smartboard as a better travel planning method (“discover travel ideas I would not become aware of otherwise”). Among the agents 75% found the system very useful for their job with 50% attesting increased productivity, quicker task completion and simplification of work.



**Figure 13:** Comparison of classic consultation and Smartboard

### Overall usability assessment

The overall usability of the system has been very positively assessed: the vast majority of participants (customers and agents) found the system interaction clear and understandable (93%), easy to learn (88%) and easy to use (87%). Furthermore, they liked using the system, found that it made travel planning more interesting (88% both) and liked the use of multimedia information (100%). All participants but one stated that they would like (31%) or very much like to use the system in the future (62%).

User comments highlighted the familiarity of the interaction style due to the system being implemented as a standard web application. Critical comments referred largely to technical details such as that clicking by touch-tipping didn’t always work properly (calibration) and that click-paths to different aspects of community information (e.g. photos, vacation reports) were too long. The users especially commended the touch interaction as a novel idea and likened the sense of touch as “bringing the sense of vacation closer”.

### Limitations of the evaluation

The formative evaluation was intended to inform design. Therefore we selected natural users (travellers, advisors) and observed them closely. We do not claim the data to be representative of all users or advisors. As in all first empirical studies of pilot systems, users may have been biased in order to please the observers or just be impressed by the novelty of the system. Generalizable data can only result from data collected after a more widespread usage in day-to-day business. As our cooperating travel agency approached us for further trials and a roll out of the system, we are optimistic to report such data in future publications.

## Starting the Next Cycle

While the evaluation results are on a too narrow basis to generalize, they are sufficient to start a new iteration of the user centered design cycle, i.e. to revisit the context of use, to surface new requirements and to trigger new design ideas. The next steps will focus on adding additional content and media as well as on investigating the emergence of new advisory processes:

*Addition content and media:* While the current content in the prototype is sufficient for running the experiments, a widespread use requires more content (e.g. text, pictures video, audio clips) from more destinations. This in turn requires a more advanced data storage approach. Furthermore, more media types may make the system more useful and provide a richer experience. Candidates for inclusion are Webcams, professional multimedia content (e.g. country reports from the BBC), user generated videos (e.g. from Youtube), travel guide information, additional catalogue information or news reports. However, there may be downsides to supplying abundant content. The more content from different sources is included, the less the advisors can control the outcome of the advisory process. Furthermore, too much information may lead to too many options. Too many attractive options make the choice so difficult for the customer that s/he may walk away to a different agency where the choice is easier. The same confusion can result from too many media switches. Thus clear criteria need to be defined for selecting additional content and media.

*New advisory processes:* The current system is built on the assumption that the basic advisory process remains stable except for the interaction with the Smartboard. However, once advisors and customers have become acquainted with the system, new advisory processes become possible. In the case of a travel agency chain, the travel advisor may include advisors close to the destination into the consultation via audio or video conferencing in conjunction with sharing the SmartTravel application. The dislocated advisor may bring in additional added-value by going into more detail. In a distant future, even local partners (e.g. from a touring company or a hotel) may be included into the process.

Another possibility is furthering the customer end-to-end support. Once the consultancy process in the travel agency is finished, the customer takes home a travel portfolio and continues to explore options at home with a reduced Internet version of the system. The state of his/her portfolio then becomes the starting point for a subsequent advisory session.

SmartTravel raises travel advisory to a new level of sophistication: Having access to more and richer information and processes requires a higher level of qualification from the travel agents. As the senior sales manager from our cooperating travel agency pointed out, raising the agents' qualification level actually is one of his objectives. Furthermore, the more advanced the processes and their media support become, the more difficult is the scheduling of necessary resources (e.g. space, staff). An augmented advisory process will lead to new organizational roles and tasks: travel agencies will need to define the ownership of the system and its data. There need to be information integrators and specialized support staff may help advisors to prepare for advisory sessions.

The current SmartTravel system is very lean – this has led to high acceptance with the initial pool of travel advisors. Everything looks easy in an experimental set-up. It will be a challenge to implement even the current system in an organization. If the system should stay lean, there must be controlled tests of any features leading to additional effort for the advisors. Negative reports from other similar areas (e.g. innovative banking advisory systems) confirm our conviction that only an intensive collaboration between research and practice can lead to sustainable innovations in the travel industry. The time appears to be ripe for such change.

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## References

- Aschoff, F., Prestipino, M., Schwabe, G. (2007): Cooperation technology and timeliness of information: Comparing travelbooks, wikis and online communities, Proceedings of the 15th European Conference on Information Systems (ECIS). St. Gallen, Switzerland, June 07-09.
- Belkin, N.J.; Oddy, R.N.; Brooks, H.M.; et al. (1982): ASK for Information Retrieval: Part I.. Journal of Documentation Vol. 38 No. 2, pp. 61-71.
- Buhalis, D. (2002): Information Technology in Tourism: Information Technology for Strategic Tourism Management. Financial Times Prent.Int.
- Buhalis, D.; Licata, M. (2002): The future eTourism intermediaries. Tourism Management, Vol. 23, No.3, pp. 207-220.
- Eisenhardt, K. (1989) Agency theory: An assessment and review, "Academy of Management Review" Vol. 14 No. 1 pp. 57-74.
- Hevner, A., R.; March, S., T.; Park, J.; Ram, S., (2004). Design Science in Information Systems Research. MIS Quarterly Vol 28 No.1 pp. 75-105.
- International Organization for Standardization (1999): ISO 13407 - Human-centred design processes for interactive systems.  
[http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_detail.htm?csnumber=21197](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=21197)
- Novak, J., Aggeler, M., Schwabe, G. (2008): Designing Large-Display Workspaces for Cooperative Travel Consultancy. In Proc. of CHI 2008, Extended Abstracts and Applications, Work-in-Progress Paper, ACM Press.
- Prestipino, M.(2008) : Die virtuelle Gemeinschaft als Informationssystem – Informationsqualität nutergenerierter Inhalte in der Domäne Tourismus. Dissertation, Universität Zürich, Zürich.
- Prestipino, M., Aschoff, F., Schwabe, G.(2006) What's the use of guidebooks in the age of collaborative media? Empirical Evaluation of free and commercial travel information, Conference Proceedings 19th Bled eConference "eValues", June 5 – 7, Bled.
- Prestipino, M.; Gerhard Schwabe, G. (2007): Neue Reiseinformation, neues Reisen.“Virtuelle Welten? Die Realität des Internet.“, T. Myrach, S.M. Zwahlen(Eds.) Verlag Peter Lang, Bern.
- Prestipino, M.; Aschoff, R.; Schwabe, G. (2007): How up-to-date are Online Tourism Communities? An empirical evaluation of commercial and non-commercial information quality. HICSS - Hawaii International Conference on System Science, Vol. 40, Kona.
- Prestipino, M.; Schwabe, G. (2005): Tourismus-Communities als Informationssysteme. Ferstl, O.; Sinz, E.; Ecker, S.; Isselhorst, T.: “eEconomy, eGovernment, eSociety“ - Proceedings der Wirtschaftsinformatik 2005, Physica, Heidelberg.
- Rodden, T., Rogers, Y., Halloran, J., Taylor, I.(2003): Designing novel interactional workspaces to support face to face consultations, Proc. of CHI 2003, ACM Press
- Scaife, M., Halloran, J., & Rogers, Y. (2002): Let's work together: supporting two-party collaborations with new forms of shared interactive representations. Proc. of COOP'2002. IOS Press,
- Schwabe, G.; Krcmar, H. (2000): Piloting a Sociotechnical Innovation. Proceedings of the 8th European Conference on Information Systems ECIS 2000, Wirtschaftsuniversität Wien, Wien 2000, pp. 132-139.
- Witte, E.(1997): Feldexperimente als Innovationstest – Die Pilotprojekte zu neuen Medien. zfbf, vol. 49, No. 5, pp. 419-428.